

Remarks

Applicants appreciate the time taken by the Examiner to review Applicants' present application. This application has been carefully reviewed in light of the Official Action mailed October 14, 2003. Applicants respectfully request reconsideration and favorable action in this case.

Claim Objections

The Examiner objected to Claims 2-9, 18-23, 32-37 and 46-51 as being dependent on a rejected based claim, but stated that these claims "would be allowable if rewritten in independent form" Applicants have amended Claim 2 to include the limitations of Claim 1, Claim 18 to include the limitations of Claim 17, Claim 32 to include the limitations of Claim 31 and Claim 46 to include the limitations of Claim 45. Applicants further submit that, as amended, Claims 3-16 depend from Claim 2, claims 19-30 depend from Claim 18, Claims 33-44 depend from Claim 32 and claims 47-58 depend from Claim 46. Accordingly, Applicants request that the Examiner allow Claims 2-16, 18-30, 32-44 and 46-58.

Rejections under 35 U.S.C. § 112

Claim 48 stands rejected under 35 U.S.C. § 112, second paragraph as lacking proper antecedent basis. Applicants have amended Claim 48 to depend from Claim 46. Applicants therefore request the Examiner withdraw the rejection of Claim 48.

Rejections under 35 U.S.C. § 103

Claims 1, 10-17, 24-31, 38-45 and 52-58 stand rejected as unpatentable over U.S. Patent No. 5,732,094 ("Petersen") in view of PR Newswire ("Seagate Software Certifies Exabyte Corporation's Fibre Channel Router and DLT Tape Library" ("Seagate").

In order to establish a prima facie case of obviousness, the Examiner must show: that the prior art references teach or suggest all of the claim limitations; that there is some suggestion or motivation in the references (or within the knowledge of one of ordinary skill in the art) to modify or combine the references; and that there is a reasonable expectation of success. M.P.E.P. 2142, 2143; In re Vaeck, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). The Examiner must explain with reasonable specificity at least one rejection – otherwise, the Examiner has failed procedurally to establish a prima facie case of obviousness. M.P.E.P. 2142; Ex parte Blanc, 13 U.S.P.Q.2d 1383 (Bd. Pat Application. & Inter. 1989). When

the motivation to combine the teachings of the references is not immediately apparent, it is the duty of the Examiner to explain why the combination of the teachings is proper. Ex parte Skinner, 2 U.S.P.Q.2d 1788, 1790 (Bd. Pat. App. & Inter. 1986).

Applicants respectfully submit that Claims 1 and 35, as amended, recite that "at a router . . . if the command requires a transfer of data larger than a threshold size, streaming the data to the [SATD/RATD]" and that "streaming of the data to the [SATD/RATD] begins before all the data is received by the router." These claims share the common feature that data is streamed to the SATD/RATD if the data to be transferred to the SATD/RATD is greater than a threshold size. This allows the router to stream data to the SATD/RATD without having to store the entire stream of data at any one time. In other words, the router can begin streaming the data before all the data is received by the router. Claims 17 and 45 recite "at a router . . . if the command requires a transfer of data larger than a threshold size, streaming the data from the [SATD/RATD]" and that "streaming of the data from the [SATD/RATD] begins before all the data is received by the first router from the [SATD/RATD]." In this case, the router can begin streaming data from the SATD/RATD without having to store the entire stream of data at any one time.

Peterson, on the other hand, teaches a network interface that can begin transmission of data frames before the entire data frame is entered into a buffer of the network interface. In other words, the network interface of Peterson can begin transmitting a data frame when the data frame reaches a predetermined threshold. Thus, Peterson addresses the functionality of a particular network interface device for transmitting and receiving data at a particular computer system on a network. Applicants submit that there is no teaching or suggestion in Peterson that the computer system with which the network interface is associated can initiate transmission of a set of data that has not been fully received by the computer system. Moreover, Seagate simply teaches that a particular FC-to-SCSI router was on the market in 1998. Seagate does not teach or suggest how data destined to/from a SATD or RATD target should be handled.

Even if combined, Applicants submit that Seagate and Peterson do not teach or suggest the present invention. While a router employing the network adapter of Peterson may be able to initiate transmission of frames before the entire frame is stored in the transmit buffer of the network adapter, this applies to data already at the computer system. There is no teaching or suggestion in Peterson that the computer system can initiate transmission of data not fully received by the computer system. Furthermore, Seagate is silent as to how data transferred

to/from a SATD/RATD should be handled. Applicants therefore submit that neither Peterson nor Seagate teach or suggest that streaming of data to/from a SATD/RATD should begin before all the data is received by a router. If the Examiner disagrees, Applicants respectfully request that the Examiner point out where "streaming of data [to/from] the [SATD/RATD] begins before all the data is received by the . . . router" can be found in Peterson or Seagate. Otherwise, Applicants respectfully request that the Examiner withdraw the rejections of amended Claims 1, 17, 31 and 45.

New Claims

Claims 59-74 have been added to more particularly claim the invention without the introduction of new matter. Claims 59 and 61 are intended to stress distinguishing features of the invention with regard to the fact that streaming of data to the SATD/RATD can include "receiving an initial set of data from the first host and storing the initial set of data in a queue; communicating data from the initial set of data to the [SATD/RATD] until a trigger amount of data remains in the queue; receiving the additional data from the first host and storing it in queue; forwarding data from the queue to the [SATD/RATD]; and continuing to request additional data from the first host, store it in the queue and forward data from the queue to the [SATD/RATD] until all of the data has been transferred."

Claims 63 and 65 are intended to stress distinguishing features with regard to the fact that streaming data from the SATD/RATD can include "(a) forwarding the command and a first memory block in the buffer FIFO queue to the [SATD/RATD]; (b) receiving a data block and a request for more free memory blocks from the [SATD/RATD]; (c) placing the data block in a data FIFO queue; (d) forwarding a next memory block in the buffer FIFO queue to the [SATD/RATD]; (e) repeating (a)-(d) until a trigger number of memory blocks remain in the buffer FIFO queue; (f) forwarding a first data block in the data FIFO queue to the first host; (g) placing an additional memory block in the buffer FIFO queue and forwarding the next memory block in the buffer FIFO queue to the [SATD/RATD]; (h) receiving a data block and a request for more free memory blocks from the [SATD/RATD]; and (i) repeating (f)-(h) until all the data has been transferred."

Claims 67 and 69 are intended to stress distinguishing features with regard to the fact that streaming data to the SATD/RATD can include "determining if a preset size memory block is free; and if the preset size memory block is free, requesting a data block from the first host,

otherwise holding-off the first host." Claims 71 and 73 are intended to stress distinguishing features with regard to the fact that streaming data from the SATD/RATD can include "determining if a threshold number of memory blocks are free; and if the threshold number of memory blocks are free, placing the threshold number of memory blocks in a buffer FIFO queue, otherwise holding-off the first host."

Double Patenting Rejection

Claims 1-58 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-42 of U.S. Patent No. 6,341,315. Applicant is including with this reply a timely filed terminal disclaimer in compliance with 37 C.F.R. § 1.321(c). U.S. Patent No. 6,341,315 and the current Application are commonly owned. Accordingly, withdrawal of this rejection is respectfully requested.

Conclusion

Applicant has now made an earnest attempt to place this case in condition for allowance. Other than as explicitly set forth above, this reply does not include an acquiescence to statements, assertions, assumptions, conclusions, or any combination thereof in the Office Action. For the foregoing reasons and for other reasons clearly apparent, Applicant respectfully requests full allowance of Claims 1-74. The Examiner is invited to telephone the undersigned at the number listed below for prompt action in the event any issues remain.

The Director of the U.S. Patent and Trademark Office is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 50-0456 of Gray Cary Ware & Freidenrich, LLP.

Respectfully submitted,

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